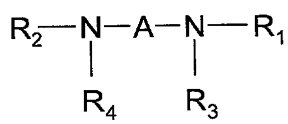
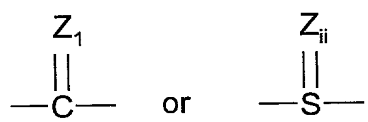
We claim:

1. A method for treating HIV which comprises administering to a patient in need thereof, an effective anti-HIV amount of a compound of the formula



IA

wherein A is



; and

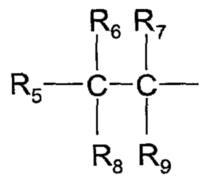
Z_i is O, Se, NR^a or $C(R^a)_2$, and

Z_{ii} is -O or $(=O)_2$;

and wherein R^a is H, OR^b, CN, NO_2, $N(R^b)_2$, SR^b, SO_2R^b, $SO_2N(R^b)_2$, COR^b, CO_2R^b, $CON(R^b)_2$, $PO(R^b)_2$, $PO(OR^b)_2$, $PO(NR^b)_2$, wherein R^b is hydrogen, C_1-C_6 alkyl, C_1-C_6 substituted alkyl, C_2-C_6 alkenyl, C_2-C_6 substituted alkenyl, C_2-C_8 alkynyl, C_2-C_8 substituted alkynyl, C_1-C_6 alkoxy, C_1-C_6 substituted alkoxy, C_{4-10} aralkyl, C_{1-10} alkaryl, C_{1-10} alkylthio, C_{4-10} aralkylthio, C_{1-10} alkylsulfinyl, C_{4-10} aralkylsulfinyl, C_{1-10} alkylsulfonyl, C_{4-10} aralkylsulfonyl, carboxy, C_{1-10} alkylthiocarbonyl, C_{4-10} aralkylcarbonyl, C_{4-10} aralkylthiocarbonyl, C_{4-10} aralkoxycarbonyl, C_{4-10} aralkoxycarbonyl, C_{1-4} alkyl, C_{4-10} aralkoxy, C_{1-12} dialkylamino-C_{1-6} aralkanoylamino C_{4-10} aralkylamino or C_1-C_4 alkanoyloxy;

R_1 is isothiazolyl, substituted isothiazolyl, tetrazolyl, substituted tetrazolyl, triazolyl, substituted triazolyl, imidazolyl, substituted imidazolyl, thiazolyl, substituted thiazolyl, thiadiazolyl, substituted thiadiazolyl, pyrrolyl, substituted pyrrolyl, theinyl, substituted thienyl, pyrazolyl or substituted pyrazolyl;

R_2 is a group of the formula



wherein R_5 is a stable, saturated or unsaturated, substituted or unsubstituted 3 to 8 member organic monocyclic ring having 0 to 4 heteroatoms selected from S, O and N; or R_5 is a stable, saturated or unsaturated, substituted or unsubstituted 7 to 10 membered organic bicyclic ring having 0 to 5 heteroatoms selected from S, O or N;

R_6, R_7, R_8, and R_9 are independently C_3-C_8 cycloalkyl, hydrogen, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, substituted C_1-C_6 alkyl, substituted C_2-C_6 alkenyl, or substituted C_2-C_6 alkynyl, C_1-C_6 substituted alkoxy, halo, amino, nitro, cyano, C_1-C_5 alkoxy, hydroxy, carboxy, hydroxymethyl, aminomethyl, carboxymethyl, C_1-C_4 alkylthio, C_1-C_4 alkanoyloxy, carbamoyl, or a halo substituted C_1-C_6 alkyl; or two of which, along with the carbons to which they are attached, combine to form a stable, saturated or unsaturated, substituted or unsubstituted, 3 to 7 membered organic monocylic ring having 0 to 4 hetero atoms selected from S, O, or N;

R_3 and R_4 are independently hydrogen, hydroxy, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, substituted C_1-C_6 alkyl, substituted C_2-C_6 alkenyl, or substituted C_2-C_6 alkynyl, substituted alkoxy, amino, cyano, nitro, C_1-C_6 alkoxy, C_1-C_6 substituted alkoxy, carboxy, hydroxymethyl, aminomethyl, carboxymethyl, C_1-C_4 alkylthio, C_1-C_4 alkanoyloxy, halo-substituted (C_1-C_6)alkyl, or carbamoyl; or a pharmaceutically acceptable salt thereof.

2. The method of Claim 1 wherein R_5 is cyclo(C_3-C_8)alkyl, cyclo (C_3-C_8) alkenyl; isothiazolyl, substituted isothiazolyl, tetrazolyl, substituted tetrazolyl, triazolyl, substituted triazolyl, pyridyl, substituted pyridyl, imidazolyl, substituted imidazolyl, phenyl, substituted phenyl, naphthyl, substituted naphthyl, benzoxazolyl, substituted benzoxazolyl, benzimidazolyl, substituted benzimidazolyl, thiazolyl, substituted thiazolyl, oxazolyl, substituted oxazolyl, benzothiazolyl, substituted benzothiazolyl, pyrazinyl, substituted pyrazinyl, pyridazinyl, substituted pyridazinyl, thiadiazolyl, substituted thiadiazolyl, benzotriazolyl, substituted benzotriazolyl, pyrrolyl, substituted pyrrolyl, indolyl, substituted indolyl, benzothienyl, substituted benzothienyl, thienyl, substituted thienyl, benzofuryl, substituted benzofuryl, furyl,

substituted furyl, quinolinyl, substituted quinolinyl, isoquinolinyl, substituted isoquinolinyl, pyrazolyl, and substituted pyrazolyl.

3. The method of claim 1, wherein R_1 is isothiazolyl, substituted isothiazolyl, tetrazolyl, substituted tetrazolyl, triazolyl, substituted triazolyl, imidazolyl, substituted imidazolyl, thiazolyl, substituted thiazolyl, thiadiazolyl, substituted thiadiazolyl, pyrrolyl, substituted pyrrolyl, theinyl, substituted thienyl, substituted furyl, pyrazolyl and substituted pyrazolyl.

4. The method of Claim 1 wherein R_3 and R_4 are hydrogen;

R_1 is thiazolyl, (4-methyl)thiazolyl, (4,5-dimethyl)thiazolyl, (4-cyano)thiazolyl, (4-ethyl)thiazolyl, 4-(3-pyridyl)thiazolyl, 4-(3-nitrophenyl)thiazolyl, 1,3,4-thiadiazolyl, imidazolyl, ;

R_2 is

$R_5—CH_2CH_2—$ or  (cis); and

R_5 is phenyl, 2-methoxyphenyl, 3-methoxyphenyl, 4-methoxyphenyl, 2-ethoxyphenyl, 2-methylphenyl, 3-methylphenyl, 2-fluorophenyl, 2,6-difluorophenyl, 2-fluoro-6-methoxyphenyl, 2-fluoro-6-ethoxyphenyl, 2,3,5,6-tetrafluorophenyl, 2-chlorophenyl, 3-chlorophenyl, 1-cyclohexenyl, 2-naphthyl, 2,5-dimethoxyphenyl, 2-azidophenyl, 2,3,4-trifluorophenyl, 2-fluoro-6-chlorophenyl, 2,6-dimethoxyphenyl, 2,3,6-trichlorophenyl, 2,6-dichlorophenyl, 2,3,5-trichlorophenyl, 3,5-dichlorophenyl, 3-fluorophenyl, 2,4-dimethoxyphenyl, 2-pyridyl, 2-(6-methoxy)pyridyl, 2-(6-ethoxy)pyridyl, 2-(6-fluoro)pyridyl, 2-(5-fluoro)pyridyl, 2-(4-fluoro)pyridyl, 2-(3-fluoro)pyridyl, 2-(6-chloro)pyridyl, 2-(5-chloro)pyridyl, 2-(4-chloro)pyridyl, 2-(3-chloro)pyridyl, 2-(5-methoxy-6-fluoro)pyridyl, 2-(3-methoxy-6- fluoro)pyridyl, 2-(6-methoxy-3-fluoro)pyridyl, 2-(5-ethoxy-6-fluoro)pyridyl, 2-(3-ethoxy-6-fluoro)pyridyl, 2-(6-ethoxy-3-fluoro)pyridyl, 2-(5,6-difluoro)pyridyl, 2-(3,6-difluoro)pyridyl, 2-(5,6-dichloro)pyridyl, 2-(3,6-dichloro)pyridyl, 2-(6-methoxy)pyridyl, 2-(6-ethoxy)pyridyl, 2-(1,3-pyrimidyl), 2-pyrazinyl, 3-pyridazinyl, 2,6-difluoro-3-methoxyphenyl, 2,6-difluoro- 3-ethoxyphenyl, 2,6-difluoro-4-methoxyphenyl, 2,6-difluoro-4-ethoxyphenyl, 2-(3-ethoxy)pyridyl, 2-(3-methoxy)pyridyl, 2,6-difluorophenyl, 2,6-difluoro-3-N-methylcarboxamidephenyl,

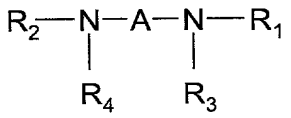
2-fluoro-6-chlorophenyl, 3-bromo-6-methoxyphenyl, 3-ethoxyphenyl, 3-bromo-6-ethoxyphenyl, 3-(2-fluoro)pyridyl, (2-vinyl)phenyl, (3-vinyl)phenyl, (3-methoxycarbonyl)phenyl, 5,6-dimethylbenzotriazolyl, 2,3-difluoro-6-methoxyphenyl, 2,6-difluoro-3-cyanophenyl, 3-ethynylphenyl, and 2,5-diethoxyphenyl.

5. The method of claim 1, wherein Z_i is O.

6. The method as recited in Claim 1 further comprising administering at least one other anti-HIV agent to said patient.

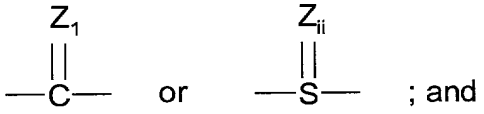
7. The method as recited in Claim 6 wherein said agent is selected from ddI, ddC, or AZT.

8. A compound having the formula



IA

wherein A is



; and

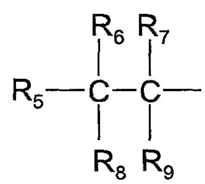
Z_i is O, Se, NR^a or $C(R^a)_2$, and

Z_{ii} is -O or $(=O)_2$;

and wherein R^a is H, OR^b, CN, NO_2, $N(R^b)_2$, SR^b, SO_2R^b, $SO_2N(R^b)_2$, COR^b, CO_2R^b, $CON(R^b)_2$, $PO(R^b)_2$, $PO(OR^b)_2$, $PO(NR^b)_2$, wherein R^b is hydrogen, C_1-C_6 alkyl, C_1-C_6 substituted alkyl, C_2-C_6 alkenyl, C_2-C_6 substituted alkenyl, C_2-C_8 alkynyl, C_2-C_8 substituted alkynyl, C_1-C_6 alkoxy, C_1-C_6 substituted alkoxy, $C_{4\text{-}10}$ aralkyl, $C_{1\text{-}10}$ alkaryl, $C_{1\text{-}10}$ alkylthio, $C_{4\text{-}10}$ aralkylthio, $C_{1\text{-}10}$ alkylsulfinyl, $C_{4\text{-}10}$ aralkylsulfinyl, $C_{1\text{-}10}$ alkylsulfonyl, $C_{4\text{-}10}$ aralkylsulfonyl, carboxy, $C_{1\text{-}10}$ alkylthiocarbonyl, $C_{4\text{-}10}$ aralkylcarbonyl, $C_{4\text{-}10}$ aralkylthiocarbonyl, $C_{4\text{-}10}$ aralkoxycarbonyl, $C_{4\text{-}10}$ aralkoxycarbonyl, $C_{1\text{-}4}$ alkyl, $C_{4\text{-}10}$ aralkoxy, $C_{1\text{-}12}$ dialkylamino-$C_{1\text{-}6}$ aralkanoylamino $C_{4\text{-}10}$ aralkylamino or C_1-C_4 alkanoyloxy;

and wherein R_1 is isothiazolyl, substituted isothiazolyl, tetrazolyl, substituted tetrazolyl, triazolyl, substituted triazolyl, imidazolyl, substituted imidazolyl, thiazolyl, substituted thiazolyl, thiadiazolyl, substituted thiadiazolyl, pyrrolyl, substituted pyrrolyl, thienyl, substituted thienyl, pyrazolyl or substituted pyrazolyl
and;

R_2 is a group of the formula



wherein R_5 is a stable, unsaturated, substituted or unsubstituted i) 3 to 8 membered monocyclic ring having 0 to 4 hetero atoms or ii) a 7 to 10 membered bicyclic ring having 0 to 5 hetero atoms, said hetero atoms being selected from S, O and N;

and

two of R_6, R_7, R_8 and R_9 are independently C_3-C_8 cycloalkyl, hydrogen, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, substituted C_1-C_6 alkyl, substituted C_2-C_6 alkenyl, or substituted C_2-C_6 alkynyl, C_1-C_6 substituted alkoxy, halo, amino, nitro, cyano, C_1-C_5 alkoxy, hydroxy, hydroxymethyl, aminomethyl, carboxymethyl, C_1-C_4 alkylthio, C_1-C_4 alkanoyloxy, carbamoyl, or a halo substituted C_1-C_6 alkyl; and the other two of which, along with the carbons to which they are attached, combine to form a stable, saturated or unsaturated, substituted or unsubstituted, 3 to 7 membered organic monocylic ring having 0 to 4 hetero atoms selected from S, O, or N;

R_3 and R_4 are independently hydrogen, hydroxy, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, substituted C_1-C_6 alkyl, substituted C_2-C_6 alkenyl, or substituted C_2-C_6 alkynyl, substituted alkoxy, amino, cyano, nitro, C_1-C_6 alkoxy, C_1-C_6 sustituted alkoxy, carboxy, hydroxymethyl, aminomethyl, carboxymethyl, C_1-C_4 alkylthio, C_1-C_4 alkanoyloxy, halo-substituted (C_1-C_6) alkyl, or carbamoyl; or a pharmaceutically acceptable salt thereof.

9. The compound of claim 8 wherein the substituted R_1 and/or R_5 groups have single or multiple substituents independently selected from halo, C_1-C_6 alkyl, C_1-C_5 alkoxy, C_2-C_6 alkenyl, C_2-C_8 alkynyl, C_2-C_8 alkenoxy, amino, nitro, cyano, carboxy, hydroxymethyl, aminomethyl, carboxymethyl, C_1-C_4 alkylthio, hydroxy, C_1-C_4 alkanoyloxy, carbamoyl, halo-substituted C_1-C_6 alkyl, C_1-C_6 alkoxy-substituted C_1-C_6 alkyl, a group of the formula

$$-SO_2R_x$$

wherein R_x is C_1-C_6 alkyl or amino; or a group of the formula

$$\begin{array}{c} O \\ || \\ -C-R_x \end{array}$$

wherein R_x is C_1-C_6 alkyl.

10. The compound of claim 8 wherein R_1 is thiazolyl, (4-methyl)thiazolyl, (4,5-dimethyl)thiazolyl, (4-cyano)thiazolyl, (4-ethyl)thiazolyl, 4-(3-pyridyl)thiazolyl, 4-(3-nitrophenyl)thiazolyl, 1,3,4-thiadiazolyl or imidazolyl.

11. The compound of claim 8, wherein R5 is cyclo(C3-C-8)alkenyl, thiazolyl, substituted thiazolyl, tetrazolyl, substituted tetrazolyl, triazolyl, substituted triazolyl, pyridyl, substituted pyridyl, imidazolyl, substituted imidazolyl, phenyl, substituted phenyl, naphthyl, sustituted naphthyl, benzoxazolyl, substituted benzoxazolyl, benzimidazolyl, substituted benzimidazolyl, thiazolyl, substituted thiazolyl, oxazolyl, substituted oxazolyl, benzothiazolyl, substituted benzothiazolyl, pyrazinyl, substituted pyrazinyl, pyridazinyl, substituted pyridazinyl, thiadaizolyl, substituted thadiazolyl, benzotriazolyl, substituted benzotriazolyl, pyrrolyl, substituted pyrrolyl, indolyl, substituted indolyl, benzothienyl, substituted benzothienyl, thienyl, substituted theinyl, benzofuryl, substituted benzofuryl, furyl, substituted furyl, quinolinyl, substituted quinolinyl, isoquinolinyl, subsituted isoquinolinyl, pyrazolyl, and substituted pyrazolyl.

12. The compound of claim 11, wherein R_5 is phenyl, 2-methoxyphenyl, 3-methoxyphenyl, 4-methoxyphenyl, 2-ethoxyphenyl, 2-methylphenyl, 3-methylphenyl, 2-fluorophenyl, 2,6-difluorophenyl, 2-fluoro-6-methoxyphenyl, 2-fluoro-6-

ethoxyphenyl, 2,3,5,6-tetrafluorophenyl, 2-chlorophenyl, 3-chlorophenyl, 1-cyclohexenyl, 2-naphthyl, 2,5-dimethoxyphenyl, 2-azidophenyl, 2,3,4-trifluorophenyl, 2-fluoro-67-chlorophenyl, 2,6-dimethoxyphenyl, 2,3,6-trichlorophenyl, 2,6-dichlorophenyl, 2,3,5-trichlorophenyl, 3,5-dichlorophenyl, 3-fluorophenyl, 2,4-dimethoxyphenyl, 2-pyridyl, 2-(6-methoxy)pyridyl, 2-(6-ethoxy)pyridyl, 2-(6-fluoro)pyridyl, 2-(5-fluoro)pyridyl, 2-(4-fluoro)pyridyl, 2-(3-fluoro)pyridyl, 2-(6-chloro)pyridyl, 2-(5-chloro)pyridyl, 2-(4-chloro)pyridyl, 2-(3-chloro)pyridyl, 2-(5-methoxy-6-fluoro)pyridyl, 2-(3-methoxy-6-fluoro)pyridyl, 2-(6-methoxy-3-fluoro)pyridyl, 2-(5-ethoxy-6-fluoro)pyridyl, 2-(3-ethoxyl-6-fluoro)pyridyl, 2-(6-ethoxy-3-fluoro)pyridyl, 2-(5, 6-difluoro)pyridyl, 2-(3,6-difluoro)pyridyl, 2-(5,6-dichloro)pyridyl, 2-(3,6-dichloro)pyridyl, 2-(6-methoxy)pyridyl, 2-(6-ethoxy)pyridyl, 2-(1,3-pyrimidyl), 2-pyrizinyl, 3-pyridazinyl, 2,6-difluoro-3-methoxyphenyl, 2,6-difluoro-3-ethoxylphenyl, 2,6-difluoro-4-methoxyphenyl, 2,6-difluoro-4-ethoxyphenyl, 2-(3-ethoxy)pyridyl, 2-(3-methoxy)pyridyl, 2,6-difluorophenyl, 2,6-difluoro-4-ethoxyphenyl, 2-(3-ethoxy)pyridyl, 2-(3-methoxy)pyridyl, 2,6-difluorophenyl, 2,6-difluoro-3-N-methylcarboxamidephenyl. 2-fluoro-6-chlorphenyl, 3-bromo-6-methoxyphenyl, 3-ethoxyphenyl, 3-bromo-6-ethoxyphenyl, 3-(2-fluoro)pyridyl, (2-vinyl)phenyl, (3-vinyl)phenyl, (3-methoxycarbonyl)phenyl, 5,6-dimethylbenzotriazolyl, 2,3-difluoro-6-methoxyphenyl, 2,6-difluoro-3-cyanophenyl, 3-ethynylphenyl or 2,5-diethoxyphenyl.

13. The compound of claim 8, wherein R_3 and R_4 are hydrogen.

14. The compound of claim 8, wherein R_2 is R_5–(cis)–cyclopropyl.

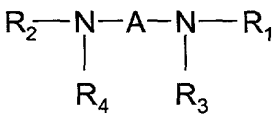
15. The compound of claim 8, wherein Z_i is O.

16. The compound of claim 8, wherein the N' linkage to R_1 is at the 2 position relative to a heteroatom in said isothiazolyl, substituted isothiazolyl, tetrazolyl, substituted tetrazolyl, triazolyl, substituted triazolyl, substituted imidazolyl, thiazolyl, substituted thiazolyl, thiadiazolyl, substituted thiadiazolyl, pyrrolyl, substituted pyrrolyl, theinyl, substituted thienyl, pyrazolyl and substituted pyrazolyl.

17. A pharmaceutical formulation comprising an effective amount of a compound as defined in claim 8; and a pharmaceutically acceptable carrier or diluent therefor.

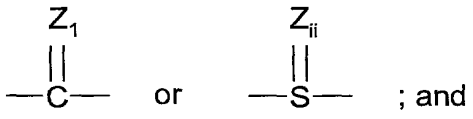
18. A pharmaceutical formulation according to claim 17, wherein said agent is selected from ddI, ddC or AZT.

19. A compound having the formula IA



IA

wherein A is



; and

Z_i is O, Se or $C(R^a)_2$, and

Z_{ii} is O or $(=O)_2$;

and R^a is H, OR^b, CN, NO_2, $N(R^b)_2$, SR^b, SO_2R^b, $SO_2N(R^b)_2$, COR^b, CO_2R^b, $CON(R^b)_2$, $PO(R^b)_2$, $PO(OR^b)_2$, $PO(NR^b)_2$, wherein R^b is hydrogen, C_1-C_6 alkyl, C_1-C_6 substituted alkyl, C_2-C_6 alkenyl, C_2-C_6 substituted alkenyl, C_2-C_8 alkynyl, C_2-C_8 substituted alkynyl, C_1-C_6 alkoxy, C_1-C_6 substituted alkoxy, C_{4-10} aralkyl, C_{1-10} alkaryl, C_{1-10} alkaryl, C_{1-10} alkylthio, C_{4-10} aralkylthio, C_{1-10} alkylsulfinyl, C_{4-10} aralkylsulfinyl, C_{1-10} alkylsulfonyl, C_{4-10} aralkylsulfonyl, carboxy, C_{1-10} alkylthiocarbonyl, C_{4-10} aralkoxycarbonyl, C_{4-10} aralkoxycarbonyl, C_{1-4} alkyl, C_{4-10} aralkoxy, C_{1-12} dialkylamino-C_{1-6} aralkyanoylamino C_{4-10} aralkylamino or C_{1-4} alkanoyloxy;

R_3 and R_4 are independently hydrogen, hydroxy, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_8 alkynyl, substituted C_1-C_6 alkyl, substituted C_2-C_6 alkenyl, or substituted C_2-C_6 alkynyl, substituted alkoxy, amino, cyano, nitro, C_1-C_6 alkoxy, C_1-C_6 substituted alkoxy, carboxy, hydroxymethyl, aminomethyl, carboxymethyl, C_1-C_4 alkylthio, C_1-C_4 alkanoyloxy, halo-substituted (C_1-C_6)alkyl, or carbamoyl;

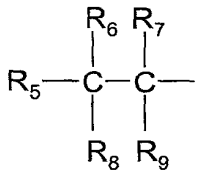
R_1 is isothiazolyl, substituted isothiazolyl, tetrazolyl, substituted tetrazolyl, triazolyl, substituted triazolyl, imidazolyl, substituted imidazolyl, thiazolyl, substituted thiazolyl, thiadiazolyl, substituted thiadiazolyl, pyrrolyl, substituted pyrrolyl, theinyl, substituted thienyl, pyrazolyl or substituted pyrazolyl; the substituents being single or multiple substituents selected from selected from halo, C_1-C_6 alkyl, C_1-C_5 alkoxy, C_2-C_6 alkenyl, C_2-C_8 alkynyl, C_2-C_8 alkenoxy, amino, nitro, cyano, carboxy, hydroxymethyl, aminomethyl, carboxymethyl, C_1-C_4 alkylthio, hydroxy, C_1-C_4 alkanoyloxy, carbamoyl, halo-substituted C_1-C_6 alkyl, C_1-C_6 alkoxy-substituted C_1-C_6 alkyl, a group of the formula

$$-SO_2R_x$$

wherein R_x is C_1-C_6 alkyl or amino; or a group of the formula

wherein R_x is C_1-C_6 alkyl

R_2 is a group of the formula



wherein R_5 is a stable, unsaturated, substituted or unsubstituted 3 to 8 membered monocyclic ring having 0 to 4 hetero atoms or ii) a 7 to 10 membered bicyclic ring having 0 to 5 hetero atoms, said hetero atoms being selected from S, O and N; R_3 and R_4 are independently hydrogen, hydroxy, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, substituted C_1-C_6 alkyl, substituted C_2-C_6 alkenyl, or substituted C_2-C_6 alkynyl, substituted alkoxy, amino, cyano, nitro, C_1-C_6 alkoxy, C_1-C_6 substituted alkoxy, carboxy, hydroxymethyl, aminomethyl, carboxymethyl, C_1-C_4 alkylthio, C_1-C_4 alkanoyloxy, halo-substituted (C_1-C_6)alkyl, or carbamoyl; and R_6, R_7, R_8 and R_9 are independently C_3-C_8 cycloalkyl, hydrogen, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, substituted C_1-C_6 alkyl, substituted C_2-C_6 alkenyl, or substituted C_2-C_6 alkynyl, C_1-C_6 substituted alkoxy, halo, amino, nitro, cyano, C_1-C_5 alkoxy, hydroxy, hydroxymethyl, aminomethyl, carboxymethyl, C_1-C_4 alkylthio, C_1-C_4 alkanoyloxy, carbamoyl, or a halo substituted C_1-C_6 alkyl;

or a pharmaceutically acceptable salt thereof;

20.The compound according to claim 19, wherein R_1 is thiazolyl, (4-methyl)thiazolyl, (4,5-dimethyl)thiazolyl, (4-cyano)thiazolyl, (4-ethyl)thiazolyl, 4-(3-pyridyl)thiazolyl, 4-(3-nitrophenyl)thiazolyl, 1,3,4-thiadiazolyl, imidazolyl,

21. The compound of claim 19, wherein R_5 is cyclo(C_3-C_8)alkenyl, thiazolyl, substituted thiazolyl, tetrazolyl, substituted tetrazolyl, triazolyl, substituted triazolyl, pyridyl, substutited pyridyl, imidazolyl, substituted imidazolyl, phenyl, substituted phenyl, thiazolyl, substituted thiazolyl, oxazolyl, substituted oxazolyl, pyrazinyl, substituted pyrazinyl, pyridazinyl, substituted pyridazinyl, thiadiazolyl, substituted thiadiazolyl, pyrrolyl, usbstituted pyrrolyl, thienyl, substituted thienyl, furyl, substituted furyl, pyrazolyl, and substituted pyrazolyl.

22. The compound of claim 21, wherein R_5 is phenyl, 2-methoxyphenyl, 3-methoxyphenyl, 4-methoxyphenyl, 2-ethoxyphenyl, 2-methylphenyl, 3-methylphenyl, 2-fluorophenyl, 2,6-difluorophenyl, 2-fluoro-6-methoxyphenyl, 2-fluoro-6-ethoxyphenyl, 2,3,5,6-tetrafluorophenyl, 2-chlorophenyl, 3-chlorophenyl, 1-cyclohexenyl, 2-naphthyl, 2,5-dimethoxyphenyl, 2-azidophenyl, 2,3,4-trifluorophenyl, 2-fluoro-6-chlorophenyl, 2,6-dimethoxyphenyl, 2,3,6-trichlorophenyl, 2,6-dichlorophenyl, 2,3,5-trichlorophenyl, 3,5-dichlorophenyl, 3-fluorophenyl, 2,4-dimethoxyphenyl, 2-pyridyl, 2-(6-methoxy)pyridyl, 2-(6-ethoxy)pyridyl, 2-(6-fluoro)pyridyl, 2-(5-fluoro)pyridyl, 2-(4-fluoro)pyridyl, 2-(3-fluoro)pyridyl, 2-(6-chloro)pyridyl, 2-(5-chloro)pyridyl, 2-(4-chloro)pyridyl, 2-(3-chloro)pyridyl, 2-(5-methoxy-6-fluoro)pyridyl, 2-(3-methoxy-6- fluoro)pyridyl, 2-(6-methoxy-3-fluoro)pyridyl, 2-(5-ethoxy-6-fluoro)pyridyl, 2-(3-ethoxy-6-fluoro)pyridyl, 2-(6-ethoxy-3-fluoro)pyridyl, 2-(5,6-difluoro)pyridyl, 2-(3,6-difluoro)pyridyl, 2-(5,6-dichloro)pyridyl, 2-(3,6-dichloro)pyridyl, 2-(6-methoxy)pyridyl, 2-(6-ethoxy)pyridyl, 2-(1,3-pyrimidyl), 2-pyrazinyl, 3-pyridazinyl, 2,6-difluoro-3-methoxyphenyl, 2,6-difluoro- 3-ethoxyphenyl, 2,6-difluoro-4-methoxyphenyl, 2,6-difluoro-4-ethoxyphenyl, 2-(3-ethoxy)pyridyl, 2-(3-methoxy)pyridyl, 2,6-difluorophenyl, 2,6-difluoro-3-N-methylcarboxamidephenyl, 2-fluoro-6-chlorophenyl, 3-bromo-6-methoxyphenyl, 3-ethoxyphenyl, 3-bromo-6-ethoxyphenyl, 3-(2-fluoro)pyridyl, (2-vinyl)phenyl, (3-vinyl)phenyl,

(3-methoxycarbonyl)phenyl, 5,6-dimethylbenzotriazolyl, 2,3-difluoro-6-methoxyphenyl, 2,6-difluoro-3-cyanophenyl, 3-ethynylphenyl, and 2,5-diethoxyphenyl.

23. The compound of claim 19, wherein R_3 and R_4 are hydrogen.

24. The compound of claim 19, wherein Z_i is O.

25. The compound of claim 19, wherein the N' linkage to R_1 is at the 2 position relative to a heteroatom in said isothiazolyl, substituted isothiazolyl, tetrazolyl, substituted tetrazolyl, triazolyl, substituted triazolyl, substituted imidazolyl, thiazolyl, substituted thiazolyl, thiadiazolyl, substituted thiadiazolyl, pyrrolyl, substituted pyrrolyl, theinyl, substituted thienyl, pyrazolyl and substituted pyrazolyl.

26. A pharmaceutical composition comprising an effective anti-HIV amount of a compound of claim 19; and a pharmaceutically acceptable carrier or diluent.

27. The composition according to claim 26, further comprising at least one other therapeutic agent.

28. A pharmaceutical composition according to claim 25, wherein said at least one other therapeutic agent is ddI, ddC or AZT.

29. A method for treating or inhibiting HIV, comprising administering to a patient suffering from HIV infection an amount of a compound of claim 19 effective for treating or inhibiting HIV.

30. A method for treating or inhibiting HIV, comprising administering to a patient suffering from HIV infection an amount of a compound of claim 8 effective for treating or inhibiting HIV.